

# DUKE CIT CENTER FOR INSTRUCTIONAL TECHNOLOGY

*Leadership in Teaching with Technology*

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## CIT Annual Update 2008-09

The Center for Instructional Technology supports academic excellence at Duke University by promoting innovation in teaching and learning. During the 2008-09 academic year, the CIT helped over 900 instructors experiment with new technologies and teaching strategies by providing individual consulting, grants, training or project support. The Blackboard course management system, used by more than 3200 active course web sites each year, links students to course materials as well as e-reserves and customized library resources. CIT staff collaborated with the Office of Information Technology, Arts and Sciences and the School of Engineering to plan the new teaching spaces in the LINK, convened programs to help faculty use the new spaces effectively, profiled their experiences, and guided a group in assessing the LINK's opening semester. For the last four years, CIT has provided project management, consulting, training and technical assistance for the Duke Digital Initiative which last year supported more than 1,000 students and faculty in exploring educational applications of emerging technologies. The CIT's work has received national and international attention and draws inquiries and visits from others looking to implement similar programs at their institutions.

### *In 2008-09, the Center for Instructional Technology...*

- **Supported faculty and courses** through Blackboard, language labs, digitization support and grants for innovation
- **Advanced Duke's strategic goals of internationalization, interdisciplinarity, and knowledge in the service of society** by supporting faculty innovation and the Duke Digital Initiative in alignment with these goals
- **Collaborated with faculty, administrators and staff** to ensure the success of pilot projects, new services and facilities, including support for the first year of teaching and learning in the Link
- **Shared best practices with the campus community and beyond** through an enhanced monthly e-newsletter, bi-annual print newsletter, feature stories on Duke Today, and customized reports for department and school administrators
- **Provided academic technology leadership** across campus and within the higher education community through service on committees, task forces, and working groups and through scholarly presentations and publications



Link ←

*In 2008-2009, the Center for Instructional Technology celebrated its tenth year of support for Duke faculty and instructors in innovative pedagogical development.*

DUKE UNIVERSITY  
LIBRARIES

## Supporting faculty and courses

**CIT provided assistance to over 900 instructors through individual consulting, grants, training or project support.**



CIT's services are often provided through one-on-one contact with faculty and instructors. Hundreds of faculty attend CIT events annually; individual programs such as office visits and consulting reach many hundreds more. All new Duke faculty receive personalized information from CIT consultants during their first semester. CIT reaches out to faculty and academic program leaders with specific ideas based on their knowledge of services, tools and techniques matched to course and program goals. CIT also supports teaching assistants, departmental IT and administrative staff, librarians, and others who play essential roles in Duke's teaching and learning excellence.

"Can I use Blackboard to give tests in large classes?"

"How can my students create digital portfolios of their work?"

"What's the best way to bring guest speakers into my course virtually?"

"What are my options for capturing lectures and learning activities to deliver online?"

"I've been hearing about Google Earth. How could I use it in my course?"

**Inquiries and ideas often come directly from faculty.**

**CIT supported over 3300 course web sites through Blackboard.** CIT staff managed the creation and enrollment process, responded to over 600 Blackboard questions referred by the OIT Service Desk, and provided 64 individual office visits. Over the summer of 2009, CIT and OIT worked together to complete a significant upgrade to Blackboard, ensuring continued support and improved functionality. Using input from instructors and usage data, the Blackboard support site ([blackboard.duke.edu](http://blackboard.duke.edu)) was redesigned to offer better self-service support to instructors.

**CIT helped faculty and students create and use multimedia.** CIT's lab provided a space for consulting and training as well as equipment for multimedia production to meet the needs of courses and academic programs. Over 425 groups used the East and West Campus Language Labs, including 368 class sessions, with at least one-third of these requesting hands-on assistance from CIT staff during the session.

## Mini Grant Awards, 2008-09

### Jump Start grants

- The Virtual Duke Oil Field: Using GPS to Teach introductory Earth Science Students about Oil Exploration (\$1950); *Alex Glass, Nicholas School of the Environment*
- Creating a Virtual Environment for Writing (\$4000); *Vicki Russell, Writing Studio*
- Camtasia and Blackboard: Distributing library instruction to multiple general chemistry lab sections (\$450) *Melinda Box, Instructor, Chemistry; Anne Langley, Chemistry Librarian and Adjunct Professor of Chemistry*



### Invited Speaker grants

- Guest lecture from Lara Lomicka for capstone event of year-long language technology pedagogy roundtable (\$700); *Deb Reisinger, Romance Studies*

### Conference Travel grants to disseminate work supported by prior CIT grants

- "Second Language in 'Second Life'? Why not?", American Association for Italian Studies Conference (\$500) *Guiliana Perco, Romance Studies*
- Using 3-D Virtual Environments in Nursing Education, National League for Nursing Education Summit (\$500) *Constance Johnson, Nursing*

### **CIT grants directly supported faculty innovation and course improvement.**

CIT supports Duke instructors in experimenting with instructional technology (IT), redesigning courses to include IT, and sharing their experiences using IT with the campus community and beyond.

Awards in 2008-09 included:

- Four Strategic Initiative Grants for a total of \$22,430 (p. 4)
- Six mini-grants totaling \$7650 (p. 2)
- 14 Fellowships to 13 faculty and one graduate student (*below*)
- 25 materials development grants supporting the creation of digital course materials

### **CIT provided intensive support to 14 Instructional Technology Fellows.**

Fellows received individual consulting support, training, and stipends for completion of program requirements. Two cohorts of CIT Fellows worked individually on course-based innovation and participated in cross-departmental group discussions and activities.

**In the Video Fellows program**, eight instructors integrating student video assignments into Spring 2009 courses attended regular Fellows meetings, completed individual and group assignments, and collaborated on creating resources for other faculty at Duke.

### **CIT Video Fellows**

- Laura Florand, *Romance Studies* (Faculty Lead)
- Jennifer Ahern-Dodson, *Education*
- Kevin Caves, *Biomedical Engineering*
- Satti Khanna, *Asian and Middle Eastern Studies*
- Brenda Neece, *Music*
- Guiliana Perco, *Romance Studies*
- Julie Reynolds, *Biology*
- Sandra Valnes Quammen, *Romance Studies*



### **Flexible Learning Spaces Fellows**

- Alison Hill, *Biology*
- Scott Huettel, *Psychology and Neuroscience* (with David Smith, graduate student)
- Lilana Paredes, *Romance Studies*
- Deborah Reisinger, *Romance Studies*
- Susan Wynn, *Education* (co-teaching with Hugh Crumley, CIT)



### **In the Flexible Learning Spaces Faculty Fellows program**

, five faculty and one graduate student teaching in the Link during its opening semester participated in group workshops and course planning activities which emphasized strategies for supporting active learning and student collaboration. Profiles on the CIT web site detail these Fellows' experiences and provide realistic examples of teaching techniques and technologies for other faculty to use as a resource for planning their own courses.

## **Faculty Fellows Reflections**

Deb Reisinger  
*Romance Studies*



### **On teaching in flexible learning spaces...**

"[We] projected images on one of the room's white boards ...broke into small groups... then returned to our seminar table and [students] worked in pairs to briefly summarize the article's argument, and we closed with a whole group debate. It was more or less a typical day, but shows how the classroom facilitates this type of classroom dynamic: it's easy to get students writing as groups on multiple boards, to move from groups to seminar-type and back again, and to blend technology into traditional forms of classroom discussions."



Julie Reynolds  
*Writing and Biology*

### **On teaching with video...**

"Video has the potential to help students become

better communicators since it requires that they have a strong understanding of what their purpose is and who their audience is. It can also help them develop their voice and communication style."

## Making a Difference: Supporting

CIT's Fall 2008 call for proposals resulted in four awards for projects aligned with Duke's current strategic goals of interdisciplinarity, student engagement in real-world issues, providing engaging and challenging learning experiences for students, transforming the arts, supporting our graduate students, and innovation in creation and delivery of scholarly resources.

### Fall 2008 Strategic Initiative Awards

#### **Latin American & Caribbean Studies ePortfolio: Measuring Student Learning Outcomes with New Technology (\$2750)** **Antonio Arce, Latin American Studies**

Duke's Center for Latin American and Caribbean Studies (CLACS) aims to implement portfolio assessment of student learning using Chalk&Wire's ePortfolio2 software. Student portfolios will contain a variety of essays, videos and other learning 'artifacts' from program experiences in and beyond the classroom. The ultimate goal, according to Arce, is to "re-structure the certificate offerings, track student progress, and measure the impact of our curriculum and extra-curricular events on the learning outcomes of our students."



#### **WIRED! New Representation Technologies for Historical Materials: Fusing Creativity with Scholarship and Communication (\$1826)**

##### **Caroline Bruzelius, Art, Art History & Visual Studies**

Bruzelius and colleagues Mark Olson, Rachael Brady, Raquel Salvatella de Prada, and Sheila Dillon developed WIRED!, a new gateway course for Spring 2009 that integrated new technologies into the teaching of historical disciplines. Students in the course collaborated with faculty at Duke in Computer Science, Engineering, historical disciplines, staff from the Nasher Museum and partners at an archaeological site in Italy to integrate scholarly research with multimedia documentation and presentation. The Center for Instructional Technology funded licenses for Strata Foto 3D software and loaned a professional SLR digital camera.



#### **Multimedia Map Interfaces for Research and Discovery (\$10,040)** **Victoria Szabo, ISIS**



ISIS students led by Szabo explored the use of GPS-enabled handheld cameras for collecting data to build annotated maps. In January 2009, eleven students created a toolkit to support a summer 2009 DukeEngage project in Muhuru Bay, Kenya and an associated website: ISISmapping.org. The project aims to create information-rich maps for school and community center planning, fund raising, outreach, and education, in collaboration with DukeEngage, WISER, and members of the local Kenyan community. Szabo and colleague Sheryl Broverman (Biology) presented their findings at the EDUCAUSE 2009 national conference.

#### **Duke Dance Database: Creation of a Digital Multimedia Archive for Live Dance Performance** **Tyler Walters, Dance (\$6300)**

Advanced students in Dance at Duke will collaborate with undergraduate engineering students in Martin Brooke's ECE 51 course to combine data from RFID tags, accelerometers, infrared emitters, and stereo video to create a prototype archive of basic ballet vocabulary using 3-D dance recording and archiving. The project will include investigations of virtual reality environments and ways to connect these 3D models to formal dance notation. CIT provided monetary support as well as loans of four high definition hard drive camcorders.



## Duke's Strategic Initiatives

### The Duke Digital Initiative (DDI)

[dukedigitalinitiative.duke.edu](http://dukedigitalinitiative.duke.edu)

DDI is a multi-year program of experimentation with new and emerging technologies to explore their effective use in support of the university's mission. CIT staff provide project management, consulting, training and technical assistance to faculty participating in DDI programs. CIT plans and coordinates assessment of DDI programs and provides reports annually to the Provost and CIO.

In 2008-09, DDI programs supported over 1000 students and instructors in capturing and collaborating with video for coursework, research, co-curricular projects and student life activities. An enhanced loaner pool and new grant programs supported at least 200 courses in approximately 70 different subject areas. An exploratory program with VoiceThread, a web-based tool to promote collaboration using video, audio, annotation and text engaged over 300 students and faculty in 18 sections of 13 different courses (mostly in languages). DDI information and training sessions were attended by over 100 instructors and staff.

### DDI 2008-09 by the numbers

- 1400+ equipment loans
- 1000+ participants
- 300+ grants
- 200+ courses
- 90+ DukeEngage students
- 70+ subject areas

### 2008-09 DDI Themes

1. *Developing an enhanced video production loaner pool*
2. *Enabling easier video editing and content creation*
3. *Providing tools and support for video-enhanced web collaboration*
4. *Exploring high definition video*

### The LINK Teaching and Learning Center in Perkins Library

[link.duke.edu](http://link.duke.edu)

CIT staff collaborated with several other groups in planning for this new teaching and learning space, which culminated in the LINK opening in August 2008.

Throughout the opening year of this innovative facility, CIT staff were engaged in many ways. They assisted the Registrar in matching faculty to classrooms appropriate for their needs and helped shape policies for use of the space. CIT supported faculty in the effective use of these new spaces through a Fellows program (p. 3), monthly lunches for instructors to discuss their experiences teaching in this facility, and ongoing collaboration with Arts & Sciences staff to provide faculty orientation and consulting. CIT participates on the Link Services Team which develops policies for the facility and reviews and prioritizes requests for use of the space.

A core purpose of the LINK is to inform academic space planning decisions that lie ahead for Duke. CIT's Head of Program Evaluation, Yvonne Belanger, worked with Ed Gomes, Associate Dean, Trinity College to guide a committee of faculty and staff through the process of developing and implementing an assessment of this space in its opening semester. Their systematic assessment looked at the impact of the new space from the perspective of students, faculty and staff. A description of the process and the committee's findings were shared with the Duke community ([link.duke.edu/assessment](http://link.duke.edu/assessment)). These findings have been widely used by peer institutions to support planning, including participants in the Project Kaleidoscope (PKAL) workshop on undergraduate learning spaces hosted by Duke in October 2009.

Link



## Promoting Innovation through Education and Outreach

**Over 500 faculty, instructors and graduate students attended at least one CIT offering in 2008-09.** Concentrated workshop series in Fall 2008 and Spring 2009 were particularly successful, attracting approximately 140 attendees each semester. Some of the most popular CIT events were the annual showcase (see *bottom of page*) as well as:

- Interactive presentation techniques, such as “Avoiding Death by PowerPoint” and “Lecture Busters: Keeping Students Engaged”
- “Faculty Toolbox” sessions and “Technology Buffet” demonstrations on Web 2.0 technologies such as RSS, social bookmarking, Google docs, flickr, Twitter, blogs and YouTube
- Workshops on “Digital Storytelling” techniques for incorporating multimedia into student projects
- Teaching IDEAS sessions for graduate students

**CIT monthly e-newsletter reached over 1700 subscribers at Duke and peer institutions, including 700 new subscribers.**

Subscriptions to CIT’s newsletter increased 80% in 2008-09. Each issue highlights news and events and provides links to more information on CIT’s web site. CIT staff published 155 blog posts highlighting promising new technologies and profiling faculty projects. In addition, several Duke faculty authored guest posts describing their success enhancing their courses with technology. CIT highlighted innovative ideas and promoted programs and services through a print newsletter to all teaching faculty in Fall 2008 and Spring 2009.

**Subscribe to the CIT Newsletter**

<http://cit.duke.edu/news/subscribe.html>

**CIT staff shared information with the broader higher education community through participation in 22 local, regional and national events.**

CIT staff attended or gave presentations at many local and regional events including the UNC Teaching and Learning with Technology (TLT) conference, the Triangle/Triad Instructional Technology (TRI-IT) conference, and national events such as EDUCAUSE, ED-MEDIA, the Society for Information Technology and Teacher Education International Conference (SITE), and the Professional and Organizational Development Network (POD) conference.

Hugh Crumley, Ph.D. presented “Lecture Busters: Practical Suggestions for Modeling Interactive Instruction” at the national Professional and Organizational Development (POD) Network Conference in October 2008.



**CIT’s Instructional Technology Showcase in April 2009 attracted 229 attendees.**

The 9th annual showcase highlighted faculty use of technology in teaching at Duke. Held in Perkins Library and the Link, the event included:

- **Twelve presentations** on the Duke Digital Initiative, teaching in 3D virtual environments, using mobile devices for mapping and communication, and technologies for virtual teamwork.
- **A keynote presentation** by James Groom from the University of Mary Washington highlighted creative and successful uses of WordPress blogging software.
- **Eighteen teaching demonstrations in the Link** featured over 20 presenters.

The showcase modeled use of new media and Web 2.0 tools through a web site created with WordPress blogging software, a live feed of Flickr photos, video from CIT’s YouTube channel, and a Twitter stream to enhance communication during and after the event (<http://www.twitter.com/dukecit>).

*On a post-event evaluation, 95% of respondents indicated that they would be likely to attend a future CIT Showcase.*



## Assessing the Potential of New Technologies

CIT's staff members investigate promising new technologies with the potential to positively impact teaching and learning at Duke. Ideas for tools to explore come from faculty and students at Duke, through professional networks and peer institutions, and from scholarly journals and mainstream media. A few active areas of investigation in 2008-09 are profiled below.



**Andrea Novicki, Ph.D. frequently consults with faculty on the use of Google Earth and GPS-enabled technologies**

**Geo-what?** CIT's consultant for the Sciences Andrea Novicki actively explores ways to collect, analyze and visualize geospatial data. She works with faculty in many disciplines to select devices and software for class projects to gather and combine these rich and complex data. Peter Haff's EOS 181 course *The American Southwest* is one example of a Duke course using geospatial data. Haff's students pooled data on geologic features of the Mojave desert gathered during a week-long field study to create a virtual rendering of the region in Google Earth. The students reported the visualization enhanced their learning by providing a sense of scale, the ability to make measurements, context for what they were seeing, and better orientation.



### Building rich collaborative web resources



Shawn Miller, CIT's consultant for the social sciences, is in high demand for his encyclopedic knowledge of emerging technologies and innovative approaches to integrating Web 2.0 technologies into course activities. He consults with faculty on tools and methods for creating interactive and collaborative sites that combine data from many sources. He routinely shares ideas about the possibilities of new technologies and supports faculty in showcasing their

work. In the past year his presentations have included *Everybody's Doing It: Web-based Visualizations and Mashups in the Social Sciences*, *Less is more: M-learning with cell phones* (with Duke faculty member Lucy Haagen), and *Visualizing the New South City: Historic Maps, Google Earth, and the Transformation of Durham* (with Duke faculty member Trudi Abel).



**Shawn Miller works directly with faculty, IT staff and librarians to plan and implement course projects that use web-based tools to combine and collaborate with data**

### The future of reading?

Building on his early investigations into e-reader technology, Humanities consultant Randy Riddle has continued to explore the next generation of portable electronic books. Devices under investigation feature long battery life, color displays, integration of multimedia content with text, and annotation capabilities. From widely available technologies such as the Amazon Kindle to not-yet-released devices that combine netbook features with e-ink technology, CIT is engaging faculty, IT staff and librarians in exploring the potential of these devices to enhance teaching and learning.



**Randy Riddle shares ideas with faculty at the CIT Showcase**

## ***Priorities for 2009-2010***

1. Promote innovation in teaching with technology through project support, Instructional Technology Fellows programs, educational events, consulting and training.
2. Explore new options for course management systems and academic tools through joint work with the E-Learning Roadmap group.
3. Plan and implement the Duke Digital Initiative for 2009-10 in collaboration with the Office of Information Technology and Trinity College of Arts and Sciences.
4. Enhance our understanding of instructional technology needs through campus outreach activities, program assessment and professional networking, and use that information to refine CIT programs.
5. Foster collaboration and connection in technology planning for University projects and strategic initiatives.

The Center for Instructional Technology provides regular updates on its priorities and activities through its website and reports  
**<http://cit.duke.edu>**

### **OUR MISSION**

#### **The Center for Instructional Technology**

- Serves as a trusted source of information about academic technologies at Duke.
- Increases faculty awareness of instructional technologies and how to use them.
- Shares expertise and builds community around pedagogical aspects of technologies.
- Provides opportunities for faculty to explore new technologies in their teaching.
- Fosters collaboration and connection in technology planning.

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